Office of Water News Clips – January 16, 2014

BRISTOL BAY: Mining poses 'significant' threat to Alaska watershed -- EPA

Outlet: E&E News PM

A major open-pit mining operation in southwestern Alaska's Bristol Bay watershed would create "significant" risks for the salmon fishery and tribal communities that depend on it, U.S. EPA said in a long-anticipated report today.

Prepared in response to the potential Pebble Mine, a copper and gold project, the final watershed assessment offers a scathing critique of mining in the watershed, saying a sprawling mine would destroy between 24 and 94 salmon streams and 1,300 to 5,350 acres of wetlands, ponds and lakes.

Under normal operations, a large-scale mine would have direct and indirect impacts on fish in 13 to 51 miles of streams, the report says. EPA also predicts problems stemming from road and pipeline pollution.

"Our report concludes that large-scale mining poses risks to salmon and the tribal communities that have depended on them for thousands of years," said EPA Region 10 Administrator Dennis McLerran, whose Seattle-based office has jurisdiction over Alaska.

EPA said it prepared the assessment in response to concerns about the potential Pebble mine from several Alaska tribes. They want the agency to use its Clean Water Act veto power to block key mining permits and protect the largest sockeye salmon fishery on the planet. The Bristol Bay ecosystem generated $480 million in economic activity in 2009, EPA said.

The Pebble project, backed by Northern Dynasty Minerals Ltd., has been promoted by its developers as one of the largest mining projects in the world. Its boosters, including some Native tribes, have cited its own economic development potential.

EPA said today that it will now begin looking at how to respond to the tribes. "A response to the tribes is what we're most concerned about developing next," McLerran said. "We have no set timeline on that."

Asked whether Pebble developers should forget about even applying for permits, McLerran responded, "No, that is not what we're saying." He said EPA may wait for the company to request approval to mine before deciding how it will proceed.

A common criticism of previous versions of the watershed assessment has been EPA's reliance on hypothetical mine scenarios. Pebble developers have also accused EPA of not paying enough attention to modern mining methods.

In a conference call this afternoon, McLerran and EPA scientist Jeff Frithsen said they analyzed credible mining scenarios in areas within the Bristol Bay watershed open to mining and where minerals are available. They said the agency looked at Pebble's own preliminary documents.

"This is a low-grade ore deposit," Frithsen said, predicting a significant amount of waste, with a tailings dam "higher than the Washington Monument."

Frithsen added, "Enormous quantities of wastewater would have to be contained and managed into the foreseeable future."

And he said it would be difficult to imagine a scenario with no accidents or exemplary treatment of water releases. As a result, the report predicted elevated stream copper levels.

Frithsen noted that the area's tribal communities are "nutritionally, economically and culturally dependent" on Bristol Bay's natural resources.

EPA and other Pebble critics have expressed concern about the mine leading to other projects in the area. And Frithsen said that "any plan to mine such low-grade ore in the Bristol Bay watershed would have elements similar to our scenario."

EPA officials emphasized what they see as the thorough nature of their review and input from members of the public, plus independent scientists.

Frithsen called it a "rigorous independent peer review." McLerran cited more than 1 million public comments and peer reviews by independent scientists.

Mine developers respond

Pebble developers, who have been dealing with their own troubles after Anglo American PLC pulled out of the project, are strongly objecting to the report's grim findings.

Pebble LP continues to analyze EPA's product, a statement said. Still, CEO John Shively said the agency's process was rushed, underfunded and sloppy.

"It must be remembered that the report does not assess the effects of the Pebble Project as we have not finalized nor submitted a project for regulatory evaluation," he said in a statement. "The report is based upon a so-called 'hypothetical mine' of the EPA's design."

Shively said EPA "has grossly over-estimated the effects of its under-engineered project. PLP has spent many years and $600 million dollars on engineering and environmental studies to develop a plan for a 21st century mine."

He added, "We understand the critical role salmon plays in this region of Alaska, both culturally and commercially. This is why we have dedicated significant time and resources to our environmental studies program and why we have taken time to design a responsible project for developing the mineral resource at Pebble."

For his part, McLerran said, "We've made no final decision on regulatory actions. It's not our response to the tribes. It's the scientific foundation."

Facility in W.Va spill flew under regulatory radar

Outlet: Washington Post - Online

The facility whose chemical spill contaminated the water supply for 300,000 West Virginia residents was barely scrutinized, flying largely under the radar of government regulators who viewed it as a low-risk operation — but in reality, a problem at a key holding wall went undetected and unreported at Freedom Industries Inc.

The chemicals stored at Freedom's facility near the Elk River are not considered hazardous enough by regulators to prompt routine inspections. On a normal day, it never created chemical waste that went into the environment. As a result, the chemical storage terminal was a low priority for regulators, who must pick and choose how to allocate scarce manpower when enforcing environmental laws.

“I think that the loophole that this facility fell into is because it was not a hazardous material, it flew under the radar,” said Randy Huffman, cabinet secretary of West Virginia's Department of Environmental Protection, which enforces environmental laws.

Freedom's storage terminal holds millions of pounds of chemicals — including some used in coal processing — just a mile and a half upstream from pipes that take in water for a public drinking supply. The distance left little opportunity for chemicals to dilute in the event of a spill.

And those chemicals were stored behind a brick-and-concrete block dike that seems to have had structural problems — an issue the company apparently was aware of. A state official says the president of Freedom told regulators that $1 million had been put into an escrow account to fix the wall that ultimately failed to hold Thursday's spill, which resulted in a five-day ban on tap water. The ban was lifted for some areas Monday afternoon.

State environmental officials would not have seen the dike problems — they say they never had reason to inspect the site.

Containment dikes are supposed to be a last line of defense against spills, preventing chemicals from flowing into the surrounding environment. Concrete containments are susceptible to cracking over time and need to be maintained, said Susan Burns, a professor of civil engineering at Georgia Tech. She was not familiar with the layout or equipment at Freedom Industries.

“A secondary containment barrier, assuming they are properly engineered and maintained, they typically work quite well,” she said. “It's unusual for us to have these types of failures.”

The situation at Freedom is probably not unique. On paper, the chemical storage terminal in West Virginia — like similar sites nationwide — simply did not fall into any inspection program, authorities said. Neither the U.S. Environmental Protection Agency nor the state DEP sent inspectors before the

spill, agency officials said.

Because the site only stored and did not manufacture chemicals, it did not need permits to discharge pollutants into the air or water. State officials said it was not required to have a ready-to-go plan for containing spills. It was not cited for any environmental violations, according to a federally run database. The last inspection report for the site dates to 2001, when it was a refinery owned by a different company and operating under more stringent rules, state environment department spokesman Tom Aluise said Monday. It is possible the agency could find additional reports as it digs through its records. Freedom didn't buy the property until last month.

Officials at the Occupational Safety and Health Administration once scheduled an inspection in 2009, then canceled it after realizing the company did not fall under any of its special emphasis programs, OSHA spokesman Jesse Lawder said.

Although regulators never visited, it appears company officials were aware of issues with the containment dike. Freedom Industries President Gary Southern told state regulators that $1 million was put into an escrow account to repair the wall, said Mike Dorsey, the DEP's director of emergency response and homeland security. Company officials have not returned calls seeking comment on the condition of the dike.

“The wall is an old cement block wall, and there's some problems with the mortar in a couple places,” Dorsey told The Associated Press. “And it came out through that.”

On an average day last year, the facility was keeping anywhere from about 11.4 million to nearly 63.5 million pounds of 10 chemicals in above-ground storage tanks and at least one warehouse, according to an inventory sheet filed with state regulators in February 2013. The AP obtained those inventories using West Virginia's open-records law.

In addition to the coal-cleaning chemical that spilled, 4-methylcyclohexane methanol, the materials on site included such chemicals as calcium chloride and soda ash, which is sometimes used to treat drinking water.

Experts say many of the chemicals are used in industrial operations and not considered extremely hazardous, though the chemical that spilled is harmful if swallowed and can cause skin and eye irritation.

“The chemicals on this list would not be chemicals where a red flag would go up and people would be extra cautious to ensure this is housed safely,” said Rolf Halden, director of the Center For Environmental Security at Arizona State University, who reviewed the inventory list.

The chemicals at the property included up to 1 million pounds of 4-methylcyclohexane methanol, which is used to separate bits of rocks and clay from mined coal. Somehow, Tank 396 suffered a 1-inch hole in its bottom, allowing the chemical to pool on the ground and somehow go through the dike, contaminating the water.

“It's not like it filled up the whole thing like a bathtub or a swimming pool,” Dorsey said.

EPA: Still trying to estimate scope of spill

Outlet: Charleston Gazette - Online, The

Government investigators are still trying to determine exactly how much of a toxic chemical spilled from the Freedom Industries tank farm along the Elk River, how much of that material soaked into the ground and how much could later leach into the water, a top U.S. Environmental Protection Agency official said this evening.

"An investigation is going on to figure out where there might be any materials in the ground, and so far that investigation is still going on," EPA regional administrator Shawn Garvin told The Charleston Gazette.

Garvin's remarks were EPA's first significant public comments about the spill last Thursday that fouled drinking water supplies for 300,000 people across a nine-county region around Charleston.

Over the last four years, EPA has become an almost-constant punching bag for West Virginia's coal industry and the politicians who support it.

Mining officials and elected leaders repeatedly denounce what they call a "war on coal," and blast EPA regulatory and enforcement efforts as "federal overreach."

But in the ongoing crisis since the chemical spill, EPA officials are nowhere to be found prior to Garvin's interview. Agency officials may be working behind the scenes, but they've not appeared at government briefings and have refused numerous interview requests.

On Tuesday, a spokeswoman for EPA administrator Gina McCarthy provided this prepared statement:

"EPA continues to work closely with other federal and state agencies in West Virginia as they begin implementing a plan for getting the water system back on line," said the statement, provided by EPA press officer Alisha Johnson.

The statement continued, "The State of West Virginia and the West Virginia American Water Company (WVAWC) are developing a plan for flushing the system, along with sampling and analysis, that will allow residents to begin using their water as soon as possible. State and Federal (ATSDR/CDC) health officials have agreed that a level of 1 part per million (ppm) of methylcyclohexanemethanol is protective of public health and the State/WVAWC will use the flushing process to assure that the 1 ppm level is achieved throughout the system.

"The EPA supports this approach and has offered sampling and monitoring assistance to the State during the restart efforts," the statement said.

The Charleston Gazette asked to interview EPA officials who are assisting in all aspects of the agency's response -- from water sampling to cleanup to determining what level of the chemical was safe.

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Like the CDC and the Agency for Toxic Substances and Disease Registry, EPA has so far declined to make any of its officials available for interviews.

Asked why, Johnson told the Gazette, "Our role right now is very limited. As we look at this, we are looking at where we have a role. Right now, that has not been determined."

EPA regional officials in Philadelphia have also refused to answer questions from the Gazette, and have not appeared at any media briefings. Late last week, calls to EPA's regional offices were bounced between several different public affairs officers.

Eventually, Terri White, EPA's top regional spokeswoman, said in an email message Friday afternoon, "EPA is closely monitoring the chemical spill in Charleston and is working closely with FEMA and other federal partners who are responding to the incident.

"The Agency has deployed on-scene coordinators to assist with water sampling and stands ready to offer additional assistance to the State of West Virginia, who is leading the response on the spill," the message said.

Asked again this week for an interview with an EPA official involved in the incident response, White said in another email message, "Given that EPA's "on-scene coordinator is not the on-scene coordinator for the incident, you'll need to speak with state officials."

Despite promises from President Obama that his would be a transparent administration, the Obama EPA has been criticized by groups including the Society of Environmental Journalists and the Union of Concerned Scientists for not being open with the press, the public and the scientific community. Republican leaders in Congress have also seized on the agency's closed-door policies in their efforts to clamp down on EPA regulatory efforts.

Earlier this week, Sen. Jay Rockefeller urged the EPA and the CDC to launch a study of the potential long-term impacts of the spill and its aftermath.

On Wednesday, EPA officials unveiled a website titled, "Charleston WV Chemical Leak" which lists its on-scene coordinators, but provides few details about what EPA is or isn't doing.

"All over its website the EPA calls itself a public health agency," said Celeste Monforton, a public health researcher with George Washington University. "A key tenet of public health is communicating openly with the public and being present to respond to public concern -- even when it doesn't have all the answers.

"EPA's failure to do so damaged the public confidence that EPA has the community's best interests in mind," Monforton said Wednesday.

W.Va. spill shows vulnerability of water supply

Outlet: Fresno Bee - Online

It's a nightmare scenario that became all too real in West Virginia: a chemical seeped into the water supply and threatened to sicken hundreds of thousands of people.

While no one became seriously ill from last week's chemical spill, some homeland security experts said the emergency was proof the United States has not done nearly enough to protect water systems from accidental spills or deliberate contamination.

Officials found out about the spill when people started calling in complaints about a strong licorice-type smell in the air. West Virginia American Water, which supplies 300,000 people with water in the central part of the state, said it would not have detected the chemical because it's not a substance utilities test for. Before the spill, no standards existed for measuring the chemical, 4-methylcyclohexane methanol, in water, the utility said.

Congress last addressed water security in a 2002 law that required utilities to assess their vulnerabilities and report them to the Environmental Protection Agency, but there was no mandate to correct the shortcomings. Subsequent efforts to establish security regulations for water systems and treatment plants have gone nowhere, despite support from the Obama and Bush administrations.

A law requiring chemical plants to develop security plans was enacted in 2007, but it specifically exempts wastewater treatment plants even though they use many of the chemicals regulated under the program. Critics said the law did not do much to make chemical plants safer either, because it didn't give the Department of Homeland Security enough enforcement authority.

A 2009 bill that passed the House but died in the Senate would have given the EPA the authority to enforce the same regulations for water treatment facilities.

Critics say water system security isn't being addressed because there's never been a wide-scale, deliberate attempt to poison the water supply.

"If this were an intentional poisoning of the water, all of a sudden you would see Congress demanding, 'Where are the plans? Why hasn't something been done?'" said Michael Greenberger, director of the Center for Health and Homeland Security at the University of Maryland. "There aren't the resources to match the problem here. And I'm sure, overtly or covertly, the thinking is, 'This has never happened.' No one's ever poisoned the water system."

Killing or sickening large numbers of people through water contamination would not be easy. Someone would need access to a large amount of chemicals and be able to dump them in a sensitive spot, which would likely attract attention, said Stephen Flynn, director of the Center for Resilience Studies at Northeastern University.

"It turns out to be fairly difficult to cause a life-threatening level of danger by essentially attacking the water system with chemicals," Flynn said. "You need a lot of chemicals, and it becomes really challenging operationally for bad people to do this on any real scale."

While no one became seriously ill in West Virginia, it was hugely disruptive as 300,000 people went without tap water for at least five days. And the long-term effects of exposure to the chemical are unknown.

Stricter regulation of chemicals and water facilities would prevent such accidents and deter terrorists, Flynn said.

The West Virginia spill is provoking some action on Capitol Hill. The Senate Environment and Public Works Committee, chaired by Sen. Barbara Boxer, D-Calif., is investigating the spill and planned two hearings to explore how similar situations could be prevented.

"We need to make sure that we identify dangerous chemicals and are making progress on chemical reforms," Boxer told reporters Tuesday.

Last year, President Barack Obama signed an executive order directing federal agencies that oversee dangerous chemicals to better share information in order to enforce existing regulations. The order was signed in response to an explosion at a fertilizer plant in West, Texas, that killed 12 people, but it could end up having some effect on regulation of water treatment plants, said Rick Hind, legislative director of Greenpeace, which has pushed for stronger controls on chemicals.

There were warnings about the Elk River's susceptibility to chemicals. A report prepared by West Virginia officials in 2002 in compliance with the Safe Drinking Water Act found that the water system in the Kanawha Valley, the area affected by the spill, had a high susceptibility to potential contamination. The report identified 53 potential contaminants to the water system, all but four of them from commercial or industrial sources. The area is known locally as Chemical Valley.

It's not clear whether anything was done to address the report's recommendations, and state officials said they were unaware of any more recent studies. The Safe Water Drinking Act does not give any additional authority to states or utilities to reduce or eliminate threats, said Lynn Thorp, of Clean Water Action.

West Virginia American Water and other utilities serving populations of 50,000 or more were required to submit vulnerability assessments to the EPA in 2003. The EPA keeps the assessments secret, and while it analyzed them to ensure they complied with the law, the agency has no authority to force water companies to enhance security. The assessments have not been updated since 2003.

Gov. Brown bids to change authority over drinking water money

Outlet: Fresno Bee - Online

Remember how lawmakers quietly dumped the idea to reorganize the state's drinking water program? This is the same program that often left small Valley cities waiting years to get healthy tap water.

The reorganization is back -- meaning the California Department of Public Health might lose control of this program. This time, the idea is in Gov. Jerry Brown's budget.

The governor proposes to do the same thing as the scuttled Assembly Bill 145, written by Assembly Member Henry Perea, D-Fresno.

The main thrust: transfer oversight of drinking water from public health to the State Water Resources Control Board. That would include the authority over the Safe Drinking Water State Revolving Fund.

Over the last three years, The Bee has written several stories about the state foot-dragging and delays in the funding for towns such as Seville in Tulare County.

Last year, the U.S. Environmental Protection Agency criticized the public health leaders because millions of federal dollars for water fixes had not been used.

EPA required a plan of action to spend the money, and the health department complied in summer.

But leaders in Valley towns continued to be skeptical. Perea's bill to reorganize the administration of the drinking water program later failed as lawmakers from larger areas refused to allow it.

Now, an elated Perea congratulated the administration for advocating the change: “Governor Brown's budget proposes a major victory for thousands of Californians who do not have access to clean and safe drinking water."

At the same time, some kind of political horse trading among politicians still could scuttle the move.

Cincinnati Innovates announces water sensor challenge winners

Outlet: Cincinnati Enquirer - Online

Cincinnati Innovates has announced the winners of its first $10,000 Water Sensor Challenge.

The challenge solicited ideas for a new generation of low-cost, low-maintenance, wireless water level sensors to help utilities meet sanitary and combined sewer overflow requirements set by the Clean Water Act.

Krishna Priya of India won a first prize award of $6,000 for a sensor solution that combines two types of sensors to generate more accurate detection of overflow incidents. A prototype exists and is ready to be tested.

Tamus Szalay of the United States and Andre Villemaire of Canada will receive $2,000 for their technologies that connect low-cost sensors with well-established communications systems to provide real time monitoring.

The Water Challenge was a collaboration between the U.S. Environmental Protection Agency, Cincinnati Innovates, InnoCentive, Metropolitan Sewer District of Greater Cincinnati (MSD) and Sanitation District No. 1 of Northern Kentucky (SD1), Stantec, and Confluence.

Judges chose the winners from 56 entries. Submissions came from countries including Afghanistan, Denmark, India, China and Uganda.

The Cincinnati Innovates competition has provided more than $350,000 in grant awards to date.

The goal of Cincinnati Innovates is to highlight the incredible commitment to innovation and collaboration we have right here in Cincinnati, said Cincinnati Innovates founder Elizabeth Edwards.

With the one of the largest water research labs in the country, this region is a driver of water innovation and this award is just one example.